

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008662**Date Inspected:** 24-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Zhi Cheng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segments**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

OBG Trial Assembly Yard

Segment 5BW/5CW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as DP621-001-023, 024, 025. The welder is identified as #066268 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3-b.

This QA Inspector observed the removal of fit up plates along the deck plate transverse splice, fit up plates were on the interior of the segment.

This QA Inspector observed arc gouging of the remaining portions of the fit up plates along the side plate transverse splice, counter weight side.

This QA Inspector observed back gouging by grinding of the root pass on the stiffener plate web splice along the

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bottom plate transverse splice.

### Segment 1AW

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SSD34-PP8.5-003. The welder is identified as #22067 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-B-T-2232-Tc-U5-F for CWR667.

### Segment 1AAW

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG1E-875, 874, 843. The welder is identified as #220063 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-T-2234-C-U2-F for CWR666.

### Segment 1BW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a fillet weld joint. The Weld joint is designated as OBW1B-028, 029. The welder is identified as #037743 and was observed welding in the 4F (overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1.

### Segment 1AAE/1AE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as OBE1A-004. The welder is identified as #047864 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-FCAW-SMAW-4G (4F)-FCM-Repair-1 for B-WR7128.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as OBE1A-003. The welder is identified as #047864 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-FCAW-SMAW-4G (4F)-FCM-Repair-1 for B-WR7127.

### Segment 2AW

This QA Inspector observed grinding of the fillet weld on the short longitudinal diaphragm to bottom plate connection at panel point 16, cross beam side

### Segment 2AW/2BW

This QA Inspector observed bolt tension verification in progress of the high strength bolts on the cable tray components.

### Segment 4AW

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This QA Inspector observed blasting in progress on the internal components of the segment.

### Segment 4AW

This QA Inspector observed ABF personnel performing Magnetic Particle Testing (MT) on the welded connection of the floor beam diaphragm to floor beam along panel point 12.

### Plate Yard

This QA Inspector selected seven (7) 460mm x 355mm plate check samples and assigned a QA Lot number to each of following sampled material:

Item 678: 18mm A709M-345F2-X-Z, HT# 07301540N0, Lot# B222-061-09

Item 679: 25mm A709M-345F2-X, HT# 09400780N2, Lot# B222-059-09

Item 680: 28mm A709M-345F2-X, HT# 09400759N2, Lot# B222-060-09

Item 681: 20mm A709M-345F2-X, HT# 09304087N2, Lot# B222-058-09

Item 682: 30mm A709M-345F2-X, HT# 09304165N3, Lot# B222-057-09

Item 683: 25mm A709M-345F2-X, HT# 09304165N3, Lot# B222-063-09

Item 684: 14mm A709M-345T2-X, HT# 09400761N2, Lot# B222-062-09

Samples were marked with Lot number, date and direction of rolling and will be shipped to an Independent Testing lab.

ZPMC Quality Control (QC) Inspector is identified as Wang Li Yang and Feng Ya Jun. QA Inspector observed QC Inspector verify welding parameters. The welding variables recorded by QC appeared to comply with the Applicable WPS.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hernandez,Dan	Quality Assurance Inspector
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<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer
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